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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,276	11/08/2001	Sara J. Trenhaile	5605USA	2725
30173	7590	03/11/2005	EXAMINER	
GENERAL MILLS, INC.			BORISSOV, IGOR N	
P.O. BOX 1113			ART UNIT	
MINNEAPOLIS, MN 55440			PAPER NUMBER	
			3629	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

 Office Action Summary	Application No. 10/008,276	Applicant(s) TRENHAILE ET AL.	
	Examiner Igor Borissov	Art Unit 3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-21 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-21 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendment received on 9/20/2004 is acknowledged and entered. Applicant's arguments have been carefully considered.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention is not within the technological arts.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural

phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. In re Toma at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather,

statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, *State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

The claims of the present application are distinguished from the claims analyzed in the decisions of *State Street*, *Alappat*, *Arrhythmia* and *AT&T*, where the claims in these cases clearly involved the use of technology as shown below.

State Street: The claims were in means plus function form and directed to a data processing system for managing a financial services configuration of a portfolio established as a partnership; the claims included limitations of a computer processor means for processing data, a storage means for storing data on a storage medium along with first through fifth means for processing different types of financial data. As such, the claims analyzed in *State Street* clearly involved the technological arts and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

AT&T Corp. The claims were directed to a method for use in a telecommunications system in which interexchange calls initiated by each subscriber are automatically routed over the facilities of a particular one of a plurality of interexchange carriers associated with that subscriber comprising generating a message record for an interexchange call between an originating subscriber and a terminating subscriber, and including, in said message record, a primary interexchange carrier (PIC) indicator having a value which is a function of whether or not the interexchange carrier associated with said terminating subscriber is a predetermined one of said interexchange carriers. In considering these claims, it is clear that technology is being used to "automatically route" calls over the facilities of interexchange carriers and generating a message record for the call. Furthermore, the courts, in analyzing these claims, clearly indicated that they recognized the claims require the use of switches and computers. See *AT&T Corp. v. Excel Communications Inc.*, 50 USPQ2d at 1450 (Fed. Cir. 1999). The court further noted that AT&T's claimed process employs subscriber's and call recipients' PICs as data, applies Boolean algebra to those data to determine the value of the PIC indicator, and applies that value through *switching and recording mechanisms* to create a signal useful for billing purposes. See *AT&T Corp. v. Excel Communications Inc.*, 50 USPQ2d at 1453 (Fed. Cir. 1999). As such, the claims analyzed in AT&T clearly involved the technological arts as recognized by the court and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

Alappat: The claims were directed to a rasterizer for converting vector list data representing sample magnitudes of an input waveform into anti-aliased pixel illumination intensity data to be displayed on a display means comprising various means for determining distances and means for outputting illumination intensity data. Alappat's invention related generally to a means for creating a smooth waveform display in a digital oscilloscope and as indicated by the court, Alappat's invention is an improvement in an oscilloscope comparable to a TV having a clearer picture. The court reasoned that invention was statutory because the claimed invention was directed to a "machine". See *In re Alappat*, 31 USPQ2d at 1552-54 (Fed. Cir. 1994). Furthermore, in the

decision of *AT&T Corp.*, the courts recognized that the claims in *Alappat* were for a machine that achieved certain results. See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 50 USPQ2d at 1452 (CAFC 1999). Once again, these claims clearly involve the technological arts as recognized by the court and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

Arrhythmia: The claims were directed to a method for analyzing electrocardiograph signals to determine the presence or absence of a predetermined level of high frequency energy in the late QRS signal including the step of converting a series of QRS signals to time segments, each segment having a digital value equivalent to the analog value of said signals at said time. In considering these claims, it is clear that technology is being used to convert a series of QRS signals to time segments having a digital value. Once again, these claims clearly involve the technological arts since one could not convert a signal to a time segment having a digital value without the aid of a computer or some processing device and, therefore, whether or not the claimed invention involved the technological arts was not an issue.

Contrary to the claims in the above-cited cases, in the present application, claims 12-13 are completely silent with regard to technology and is purely an abstract idea or process steps that are employed completely without the use of any technology whatsoever. The claims are no more than a suggested idea of calculating a blend output based on certain parameters, including current cost of ingredients. The method step: *downloading over a network time-sensitive data* may be understood as merely transmitting data over the network without transforming said data. However, the claimed invention must utilize technology in a non-trivial manner (*Ex parte Bowman*, 61 USPQ2d 1665, 1671 (Bd. Pat. App. & Inter. 2001)). Although *Bowman* is not precedential, it has been cited for its analysis.

Furthermore, in accordance with MPEP 2106 (IV)(B)(2)(b) "Statutory Process Claims", not all processes are statutory under 35 U.S.C. 101. *Schrader*, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer related process must either: (A) result in a physical transformation outside the computer for which a practical

application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts. See *Diamond v. Diehr*, 450 U.S. at 183-184, 209 USPQ at 6 (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-788 (1877)). The claims in the present application do not appear to satisfy either of the two conditions listed above. First, the claims do not include limitations that would suggest a computer is being used to transform the data from one form to another that would place the invention in the technological arts. Second, disregarding the fact that there is no computer claimed that would physically transform the data, there does not appear to be any physical transformation of data. The claims merely determine a blend output based on received information. Thus, there neither appears to be any physical transformation of data from one form to another, which is based upon an algorithm or a calculation by a computer or processor, nor is there any technology claimed that would be used to transform the data.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) a network system, or mere implication of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble.

As to "wherein" clause, it merely states the intended use of the invention, or the result of the limitations in the claim, and adds nothing to the patentability of the claim. Mere intended or nominal use of a component, albeit within the technological arts, does not confer statutory subject matter to an otherwise abstract idea if the component does not apply, involve, use, or advance the underlying process.

Because the independently claimed invention is directed to an abstract idea which does not recite a limitation in the technological arts, those claims are not permitted under 35 USC 101 as being related to non-statutory subject matter. However, in order to consider those claims in light of the prior art, examiner will assume that those claims recite statutorily permitted subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (US 5,105,767) (Gordon) in view of Larsen (4,786,182) and further in view of Kimle et al. (US 2005/0004809 A1) (Kimle).

Claims 12 and 14. Gordon teaches a computerized monitoring system and method for animal feed ration processing mills, comprising: formulating a blend output to form most cost efficient blended product (C. 1, L. 5-9; C. 1, L. 62-67), wherein said formulating includes monitoring data related to ingredients of the actual blend and comparing said data with recommended by an agricultural research facility (model data) (C. 2, L. 63 – C. 3, L. 3) to provide online analysis of a rations being processed (C. 2, L. 65-66).

Gordon does not specifically teach that said *comparing* step includes comparing *an actual blend cost* and *a model blend cost*. Also, Gordon does not explicitly teach that said cost-related data is time-sensitive data and related to the current market cost of at least one ingredient.

Haefner teaches a method and system for production of animal feed, comprising: calculating cost characteristics of ingredients used in formulating animal feed output; comparing the cost of actual blend to the cost of existing (model) feedstuff; and selecting said ingredients based on said comparing to achieve an end product (C. 3, L. 5-6; C. 5, L. 50-54).

Kimle teaches a method and system for facilitating the contracting of agricultural products using the Internet is used for providing food processing companies (buyers)

Art Unit: 3629

and grain producers (sellers) with real time information relating to the type and amount of agricultural products available for contract [0030], wherein pricing for the quantity and types of agricultural products available for contract are displayed in real time (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Gordon to include comparing *an actual blend cost* and a *model blend cost*, as disclosed in Haeffner, because it would advantageously allow to keep cost of production in control, thereby increase profits. And it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Gordon and Haeffner to include that said ingredients data is real-time market data, as disclosed in Kimle, because it would advantageously allow to maximize profit by adjusting product recipe to include the best priced ingredients at the moment.

Claims 13 and 15. Gordon teaches that said ingredients include grain (C. 10, L. 8).

Claim 16. Gordon teaches providing an interactive online analysis, thereby obviously indicating an interactive user input/output (C. 2, L. 65).

Claim 17. Gordon teaches providing said blend output, said output including percent protein information and grain moisture information (C. 2, L. 39). Haeffner teaches providing ton (bushel) related information (C. 5, L. 47; C. 11, L. 41). The motivation to combine Gordon and Haeffner would be to maintain quality control over the output product.

Claim 18. Haeffner teaches said method, wherein the output includes information related to a difference between actual blend cost and existing (model) blend cost (C. 5, L. 50-67).

Claim 19. Gordon teaches tracking said ingredients usage, and computing analysis statistics for ingredients being processed (C. 2, L. 34-40).

Claim 20. Printing from a computer is old and well known. Therefore, it would have been obvious to one having ordinary skill in art the time the invention was made to modify Gordon, Haeffner and Kimle to include printing the result of output calculation, because it would advantageously provide users with hard copy of the results.

Art Unit: 3629

Claim 21. Gordon teaches selecting a variety of grains (C. 10, L. 8). Kimle teaches said method, wherein wheat prices are monitored in real time [0019]. The motivation to combine Gordon and Haeffner with Kimle to include wheat would be to increase revenue by offering a blend output including an important and widely used nutritional product.

Claim 33. See reasoning applied to claim 12.

Response to Arguments

Applicant's arguments with respect to claims 12-21 and 31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see form PTO-892).

Any inquiry concerning this communication should be directed to Igor Borissov at telephone number (703) 305-4649 before April 13, 2005, and (571) 272-6801 after that date.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist before April 13, 2005, whose telephone number is (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Weiss, can be reached at (703) 308-2702 before April 13, 2005, and (571) 272-6812 after that date.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231

or faxed to:

(703) 872-9306 [Official communications; including After Final
communications labeled "Box AF"]

Art Unit: 3629

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 7th floor receptionist.

Igor Borissov
Patent Examiner
Art Unit 3629

A handwritten signature in black ink, appearing to read 'Igor Borissov', with a stylized, sweeping flourish at the end.

IB

03/06/2005